Investigation of the Effects of Hydroalcholic Extract of Figwort (Scrophularia Striata) on Testicular Parameters of Diazinon Exposed Male Rats

Abstract

Background and Objective: *The vast majority of the native plants of Iran have medicinal properties such as antioxidants properties, anti-inflammatory, antimicrobial, and anti-tumor. It is been several years that Scrophularia Striata is considered as a traditional plant in different medical treatments. However, comprehensive studies on its effects on reproduction is still lacking in the literature. The present study is aimed at, investigating the possible protective effects of the Scrophularia Striata against hormonal and testicular changes in comparison to the proven effects of the vitamin E on Diazinon exposed male Rats.*

Methods: *After reverse light/dark cycle adaptation (12 hours) of 42 tree months aged mature Wistar male Rats, on average weight of 300g, they are divided into six random groups. The control group did not exposed on any drug. For the second group, Dimethyl sulfoxide solvent (0.1%) is injected. For the third group Diazinon (30 mg/kg/day), fourth group Scrophularia Striata (200 mg/kg/day), fifth group Diazinone (30 mg/kg/day) with Scrophularia Striata (200 mg/kg/day), and sixth group Diazinone (30 mg/kg/day) with vitamin E (200 mg/kg/day) are intraperitoneally injected. The period of injections for all the groups were 56 days according to the Sexual cycle of the male Rat.*

Results: *Injection of DZN into male rats over 56 days decreased the weight of testes and rats, as well as the reduction of sexual parameters including reduction in the number and percentage of sperm motility compared to the control group. Also testicular injury followingDZN administration resulted in histological changes of testis, which were resolved by simultaneous administration of DZN and SS.*

Conclusion: *The results of the present study shown that, the hydroalcoholic extract of the figwort and vitamin E can protect the testicular tissue and sexual hormones changes against the cellular apoptosis, inflammation and produced free radicals due to the Diazinone metabolism.*

Keywords: *Scrophularia Striata, Diazinone, LH, FSH, Testosterone, Testicle*